

What's New?

Updated ~~June~~ July 2015

With support from the City of Columbia Falls and the State of Montana, EPA has proposed to add the Anaconda Aluminum Company's Columbia Falls Aluminum Reduction Plant (also known as Columbia Falls Aluminum Company Plant) near Columbia Falls, Montana, to the National Priorities List (NPL). Adding the site to the NPL would make it eligible for comprehensive investigation and cleanup resources under EPA's Superfund program.

[View the news release »](#)

The Superfund law provides the public an opportunity to participate throughout the Superfund process. EPA accepted public comments on the proposed Superfund listing through June 2, 2015.

Records used in making this proposed Superfund listing are available at the following locations:

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130 6th Street West
Columbia Falls, MT 59912
406-892-5919

Hours:

Monday 10 a.m.–6 p.m.
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EPA Region 8 Headquarters

Superfund Records Center
1595 Wynkoop Street
Denver, CO 80202-1129
To request copies of documents call:
303-312-7273 or
800-227-8917 ext. 312-7273 (toll free Region 8 only)

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Site Description

The aluminum reduction plant began production in 1955, operated by the Anaconda Copper Mining Company. Aluminum was produced at the facility using the Hall Heroult process. The plant ceased production in 2009.

Multiple potential sources, including landfills and percolation ponds, are located at the facility. A byproduct of the aluminum reduction process is spent potliner material, which is known to contain cyanide and fluoride compounds that can leach into groundwater. Spent potliner material was disposed on site from approximately 1955 to approximately 1985. Other landfills and ponds have been used to dispose of various waste streams throughout the lifespan of the plant.

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Potential Site Risks

Media Affected	Contaminants	Source of Contamination
Percolation ponds (water and sediment)	cyanide; fluoride; semi-volatile organic compounds; metals, including aluminum, arsenic, chromium, copper, iron, lead, magnesium, manganese, nickel, sodium, vanadium, zinc; pesticides; Arochlor-1254	aerial deposition; ponds received process fluids that have since (partially) evaporated or percolated
Groundwater down-gradient of landfill area	cyanide; fluoride; metals, including aluminum, arsenic, chromium, copper, iron, lead, nickel, selenium, vanadium	leaching from landfills and sludge pond complex, percolation ponds, and potentially other unknown sources
Cedar Creek and Flathead River	cyanide; fluoride; metals, including copper, manganese, potassium, sodium, zinc	groundwater infiltration; groundwater seeps

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Investigation Results

A Site Reassessment was completed for the Columbia Falls Aluminum Reduction Plant site in April 2014. EPA collected environmental samples in September and October 2013 as part of the Site Reassessment. Results from that report are summarized here. The full report for this investigation is available in [Site Documents](#) below. The assessment and report is organized such that sources are evaluated to determine associated contaminants and then compared to analytical results for potential receptors, including surface water and groundwater down gradient of the source areas.

Landfill Sources

Samples were not directly collected from landfills at the site to ~~avoid~~ prevent compromising the integrity of the covers. In lieu of direct sampling, EPA sampled monitoring wells previously installed in locations down-gradient and up-gradient of the landfill and sludge pond sources to determine if contaminants have been released to groundwater.

Multiple contaminants were detected in groundwater above background concentrations, including cyanide, fluoride, and metals, such as aluminum, arsenic, chromium, copper, iron, lead, nickel, selenium and vanadium, among others.

Percolation Pond Sources

Waste sediment and surface water samples were collected from two percolation ponds for a common hazardous constituent analysis to determine contaminants present in the ponds at the site. Multiple contaminants were detected in the water and sediment samples, including: cyanide and fluoride; semi-volatile organic compounds, such as anthracene, benzo(a)pyrene, chrysene, fluoranthene, and pyrene, among others; metals, including aluminum, arsenic, chromium, copper, iron, lead, magnesium, manganese, nickel, sodium, vanadium and zinc, among others; and pesticides.

Groundwater Migration Pathway

As discussed previously, landfill sources were indirectly evaluated by comparing down-gradient groundwater samples to up-gradient, background groundwater samples. This evaluation confirms that contaminants discussed previously have been released to groundwater at the site. Groundwater samples collected from monitoring wells at the facility contained multiple contaminants, including cyanide, fluoride, arsenic, chromium, lead, and selenium, with concentrations above federal drinking water standards. Although the groundwater at the facility is not used for drinking purposes, the groundwater has the potential to migrate.

Three rounds of domestic well sampling have occurred. As part of the Site Reassessment sampling event conducted in September and October, 2013, five residential wells were evaluated to determine if groundwater near the facility has been impacted. Cyanide was detected in one well southwest of the facility and one well to the north of the facility. The detections of cyanide were below EPA's Maximum Contaminant Levels (MCL) for drinking water and the State of Montana's Numeric Water Quality Standards. When compared to EPA's Risk-Based Screening Levels, however, the concentrations of cyanide in both water samples were higher than the EPA Tapwater Risk-Based Screening Level. The screening concentration is a conservative value that EPA considers to be protective for humans over a lifetime. Exceeding these values does not necessarily indicate that a health affect will occur, but that a more detailed assessment may be warranted. No other contaminants were detected above the regulatory benchmarks or risk-based screening levels in residential wells during the first round of sampling. As part of subsequent sampling events, in April 2014 and November 2014, 20 residential wells and 10 residential wells, respectively, were sampled. For all residential wells in both subsequent sampling events, there were no contaminants detected above the regulatory benchmarks or risk-based screening levels, including cyanide.

Surface Water Migration Pathway

Surface water and sediments from the Flathead River and Cedar Creek were collected for a common hazardous constituent analysis. Similar to the groundwater analysis, downstream samples were compared to background samples to determine if there is an observed release of any contaminants. In Cedar Creek, there were observed releases of copper, cyanide and potassium. In ~~the~~ Flathead River, there were observed releases of cyanide, manganese, sodium, zinc and fluoride.

This stretch of the Flathead River is used by anglers. Fish tissue samples were not collected as part of the site reassessment. With the limited amount of data captured as part of this sampling event, it is unknown if bioaccumulation of these contaminants is a concern.

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Next Steps

After proposal to the National Priorities List, there ~~will be~~was a 60-day comment period, ~~which ended June 2, 2015. At the close of the comment period, EPA will~~ is in the process of reviewing and responding to all pertinent comments. A final decision regarding adding the site to the National Priorities List will be documented in a subsequent Federal Register notice. ~~The earliest~~ The Anaconda Aluminum Company Columbia Falls Reduction Plant site could be ~~will likely not be finalized on the National Priorities List would be in the fall before spring of 2015.~~

The Remedial Investigation/Feasibility Study (RI/FS) is the next phase of the Superfund process. The objectives of the RI/FS are to determine the nature and extent of contamination at the site, test whether certain technologies are capable of treating the contamination, and evaluate the cost and performance of technologies that could be used to clean up the site. Community involvement during the RI/FS is highly encouraged. For information on how to get involved, visit EPA's [Superfund Community Involvement](#) site.

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Site Documents

[Fact Sheet, June 2015](#)

[Federal Register proposed rule for listing on the National Priorities List, March 26, 2015](#)

[Letters supporting NPL proposal from Montana Governor Bullock and Columbia Falls Mayor Barnhart](#)

Contacts

Robert Parker
Site Assessment Manager
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street (EPR-AR)
Denver, CO 80202-1129
303-312-6664
800-227-8917 ext. 312-6664 (toll free Region 8 only)
parker.robert@epa.gov

Mike Cirian
Remedial Project Manager
U.S. Environmental Protection Agency, Region 8
Information Center
108 E. 9th Street
Libby, MT 59923
406-293-6194
cirian.mike@epa.gov

Cynthia Peterson
Community Involvement Coordinator
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street (OC-PAI)
Denver, CO 80202-1129
303-312-6879
800-227-8917 ext. 312-6879 (toll free Region 8 only)
peterson.cynthia@epa.gov

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